

REMARKSRegarding the Status of the Claims:

Claims 27 – 47 are pending.

Claims 27 – 47 are rejected.

Amendments to the Claims:

Applicants have amended claims 39 and 41-43 to remedy formalities, and have amended claim 42 to eliminate an indefiniteness rejection. No new matter has been added. Amendment of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented.

Regarding the Objections to the Specification:

The Office action objects to the specification as failing to provide antecedent basis for several “means plus function” terms. This ground of objection is traversed.

The specification provides support for a transport device comprising “means for holding a plurality of vessels” as recited in claim 27. Similarly, the specification provides support for a second transport device comprising “second means for holding a plurality of vessels” as recited in claim 31. Since the term “vessel holding means” is simply an alternate expression for “means for holding a plurality of vessels,” the specification also provides support for “vessel holding means” as recited in claims 27 and 31. For example, on page 3, lines 13 – 14, the specification explains, “[t]he multipath incubator includes a) a transport device (e.g. an incubator belt) having a plurality of vessel holding members” Figure 2 also illustrates “Vessel Holding Members 207.” Figures 7 and 8 illustrate embodiments of the invention having multiple transport devices each comprising means for holding a plurality of vessels.

The specification provides support for a transport device comprising “means for moving the vessel holding means in a continuous loop” as recited in claim 27, and in claim 38, which depends from claim 27. Similarly, the specification provides support for a second transport device comprising “second means for moving the vessel holding means in a continuous loop” as recited in claim 31. For example, on page 3, lines 13 – 16, the specification explains, “[t]he multipath incubator includes a) a transport device (e.g. an incubator belt) having a plurality of vessel holding members where the transport device moves the plurality of vessels along one or

more continuous loops” Figure 2 illustrates “Vessel Holding Members 207,” and “Incubator Belt 202.” Figures 7 and 8 illustrate embodiments of the invention having multiple transport devices each comprising means for holding a plurality of vessels, and “Incubator chains 802.” Various embodiments of incubator belt arrangements are discussed in the specification. *See*, page 14, lines 4 – 14, for example.

The specification provides support for a transfer station comprising “a means for moving vessels to and from the vessel holding means” as recited in claim 27. Similarly, the specification provides support for a transfer station comprising “a means for moving vessels (i) from the vessel holding means of the first transport device to the vessel holding means of the second transport device, and (ii) from the vessel holding means of the second transport device to the vessel holding means of the first transport device” as recited in claim 31. For example, on page 5, lines 18 – 23, the specification explains, “[i]n one embodiment, the removing or replacing step is achieved using a transfer station which includes a transfer slide that moves perpendicular to a portion of a path traveled by the transport device, the transfer slide having one or more projecting members which contact a vessel and move the vessel while the transfer slide is moved.” On page 9, lines 9 – 11, the specification further explains, “movement of the test vessel into and out of the station is preferably accomplished by means of a transfer slide, depicted schematically as 20A and 20B in FIG. 2.” The specification also describes a means for moving vessels to and from the vessel holding means on page 10, line 5 – page 11, line 16. Finally, Figures 3A, 3B, 3C, 3D, 4A, 4B, 4C, and 4D illustrate means for moving vessels to and from the vessel holding means.

The specification provides support for a delivery station comprising “means for delivering one or more vessels to the transport device” as recited in claim 32. For example, on page 3, lines 13 – 17, the specification explains, “[t]he multipath incubator includes ... b) at least one delivery station for adding a vessel to the transport device at a specified vessel holding member of the plurality of vessel holding members....” Vessel Delivery Stations are also illustrated in Figures 2, 7, 8 and 9.

Regarding the Claim Rejections:

The Office action rejects:

- I. Claims 42 – 44 under 35 U.S.C §112 second paragraph as being indefinite;
- II. claims 27 – 45 under 35 U.S.C §102(b) over US 5,380,487 to Choperena et al. (“Choperena”); and
- III. claims 46 and 47 under 35 U.S.C §103(a) over Choperena.

Regarding Rejection I:

This ground of rejection is traversed to the extent that it requires recitation of a structural connection between elements as contrasted with the structural cooperative relationship set forth in MPEP 2172.01. Claim 42 clearly recites the cooperative relationship between the transfer shuttle and the first and second projecting members by reciting the functions of the first and second projecting members that are performed in response to motion of the transfer shuttle. Notwithstanding this, claim 42 has been amended to provide a structural relationship between the transfer shuttle and the first and second projecting members. Accordingly, reconsideration and withdrawal of the indefiniteness rejection is requested.

Regarding Rejection II:

Applicants respectfully submit that the rejection of claims 27 – 45 under 35 U.S.C §102(b) over Choperena should be withdrawn.

Choperena discloses an automated chemical analyzer that includes read station 130, wash station 100 and incubator 50. Vessels 52 travel within the incubator on incubation belt 54, and travel within the integrated read station and wash station on rotating component or wash wheel 102. Vessels 52 are transferred between incubation belt 54 and rotating component 102 via transfer stations 80 and 120.

Choperena does not disclose a multipath access system for use in an automated immunoassay analyzer, comprising a transfer a transfer shuttle, positioned to slide in a direction perpendicular to a portion of the transport device, for moving vessels to and from the vessel holders, and a programmable controller, programmed to determine an individual path along the continuous loop for each of a plurality of vessels, where each vessel has a resource requirement,

and where the determination of each path is based on the resource requirement associated with each vessel.

As stated at col. 6, lines 17 – 24, each slot of the Choperena analyzer is equal to the first indexing time of the incubator belt, and thus a vessel can be transferred to the wash wheel only at the beginning of the indexing cycle of the incubator. Because the processing cycle is fixed, the scheduler matches analyte tests and assay resources within the fixed cycle.

Thus, Choperena fails to disclose “a programmable controller, programmed to determine an individual path along the continuous loop for each of the vessels, wherein the determination of each path is based on a resource requirement associated with each vessel.” This is because each of the vessels on belt 54 and each of the vessels on wash wheel 102 moves in synchronization because the belt 54 intersects the wash wheel 102 in single position-by-position increments. As disclosed at col. 13, lines 1 – 6, reaction vessels are transported along a predetermined path and at predetermined positions along that path the reaction vessels will be acted upon by the wash station and/or the read station.

In contrast, the claims of the present disclosure require that the vessels proceed on an individual path based on the resource requirement associated with each vessel, which is enabled by the “means for moving vessels” as claimed. In addition, the programmable controller utilizes information about the resource requirements for each individual vessel to determine the individual path. Therefore, Choperena does not anticipate the claims of the present application at least because there is no programmable controller as claimed, and therefore an individual path cannot be determined for each vessel.

Regarding Rejection III:

Applicants respectfully submit that the rejection of claims 46 and 47 under 35 U.S.C §103(a) over Choperena should be withdrawn.

The Office rejects claims 46 and 47 on the basis of the following statement:

it would have been obvious to one of ordinary skill in the art at the time of the invention to move the motor of the first continuous loop (belt 54) clockwise and then counterclockwise so as to achieve the necessary incubation time before transporting to the second continuous loop (e.g., wash station loop 100 or read station loop 130).

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP § 2143).

With respect to claims 46 and 47, the Office has not shown that the Choperena teaches or suggests all the claim limitations. (MPEP § 2143). Instead, the Office presents a conclusory statement that these claims are obvious without support. Accordingly, the Applicants request withdrawal of this rejection.

Claims 46 and 47 are also in condition for allowance based on the same reasons given in rejection I. With regard to claim 46, it is allowable based on its dependence from claim 27. With regard to claim 47, Choperena does not disclose “determining an individual path along a first continuous loop for each of a plurality of samples” because the samples of Choperena move in concert with one another, and therefore cannot move on an “individual path” as recited in claim 27. Additionally, Choperena nowhere discloses or suggests optimizing the path determined for each sample as required by claim 47.

In Conclusion:

The present application is in condition for allowance. Applicants request favorable action in this matter. To facilitate the resolution of any issues or questions presented by this paper, the Examiner is welcome to contact the undersigned by phone to further the discussion.

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